

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number 09/710,633

Filing Date November 8, 2000

First Named Inventor Kent

Art Unit 1654

Examiner Name J. E. Russel

Attorney Docket Number TSRI 478.0 C1

ENCLOSURES (Check all that apply)

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Fee Transmittal Form | <input type="checkbox"/> Drawing(s) | <input type="checkbox"/> After Allowance Communication to TC |
| <input checked="" type="checkbox"/> Fee Attached | <input type="checkbox"/> Licensing-related Papers | <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences |
| <input type="checkbox"/> Amendment/Reply | <input type="checkbox"/> Petition | <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) |
| <input type="checkbox"/> After Final | <input type="checkbox"/> Petition to Convert to a Provisional Application | <input type="checkbox"/> Proprietary Information |
| <input type="checkbox"/> Affidavits/declaration(s) | <input type="checkbox"/> Power of Attorney, Revocation | <input type="checkbox"/> Status Letter |
| <input checked="" type="checkbox"/> Extension of Time Request | <input type="checkbox"/> Change of Correspondence Address | <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): |
| <input type="checkbox"/> Express Abandonment Request | <input type="checkbox"/> Terminal Disclaimer | - Supplemental Reply to Examiner's Answer |
| <input type="checkbox"/> Information Disclosure Statement | <input type="checkbox"/> Request for Refund | - Postcard |
| <input type="checkbox"/> Certified Copy of Priority Document(s) | <input type="checkbox"/> CD, Number of CD(s) _____ | |
| <input type="checkbox"/> Reply to Missing Parts/Incomplete Application | <input type="checkbox"/> Landscape Table on CD | |
| <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53 | | |

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name The Scripps Research Institute

Signature

Printed name Donald G. Lewis

Date November 23, 2005

Reg. No. 28,636

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature

Typed or printed name Donald G. Lewis

Date November 23, 2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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NOV 28 2005

PTO/SB/17 (12-04v2)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Effective 08/2005
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).**FEE TRANSMITTAL**
For FY 2005☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 165.00

Complete if Known

| | |
|----------------------|------------------|
| Application Number | 09/710,633 |
| Filing Date | November 8, 2000 |
| First Named Inventor | Kent |
| Examiner Name | J. E. Russel |
| Art Unit | 1654 |
| Attorney Docket No. | TSRI 478.0 C1 |

METHOD OF PAYMENT (check all that apply)☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☒ Deposit Account Deposit Account Number: 19-0962 Deposit Account Name: _____

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee☒ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

| Application Type | FILING FEES | | SEARCH FEES | | EXAMINATION FEES | | Fees Paid (\$) |
|------------------|-------------|-----------------------|-------------|-----------------------|------------------|-----------------------|----------------|
| | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | Fee (\$) | Small Entity Fee (\$) | |
| Utility | 300 | 150 | 500 | 250 | 200 | 100 | |
| Design | 200 | 100 | 100 | 50 | 130 | 65 | |
| Plant | 200 | 100 | 300 | 150 | 160 | 80 | |
| Reissue | 300 | 150 | 500 | 250 | 600 | 300 | |
| Provisional | 200 | 100 | 0 | 0 | 0 | 0 | |

2. EXCESS CLAIM FEES

| Fee Description | Fee (\$) | Small Entity Fee (\$) |
|--|----------|-----------------------|
| Each claim over 20 (including Reissues) | 50 | 25 |
| Each independent claim over 3 (including Reissues) | 200 | 100 |
| Multiple dependent claims | 360 | 180 |

| Total Claims | Extra Claims | Fee (\$) | Fee Paid (\$) |
|--------------------------|--------------|----------|---------------|
| _____ - 20 or HP = _____ | x _____ | = _____ | |

HP = highest number of total claims paid for, if greater than 20.

| Indep. Claims | Extra Claims | Fee (\$) | Fee Paid (\$) |
|-------------------------|--------------|----------|---------------|
| _____ - 3 or HP = _____ | x _____ | = _____ | |

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

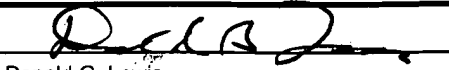
| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof | Fee (\$) | Fee Paid (\$) |
|---------------------|--------------|--|----------|---------------|
| _____ - 100 = _____ | / 50 = _____ | (round up to a whole number) x _____ | = _____ | |

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Balance due for 2 mo. ext. of time \$165.00

SUBMITTED BY

| | | | |
|-------------------|---|---|------------------------|
| Signature |  | Registration No. 28,636 (Attorney/Agent) | Telephone 858-784-2937 |
| Name (Print/Type) | Donald G. Lewis | Date November 23, 2005 | |

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re:

| | | |
|---------------------------------|---|--------------------------|
| Applicant: Kent, et al. |) | |
| |) | |
| Serial No.: 09/710,633 |) | Group Art Unit: 1654 |
| |) | |
| Filed: November 8, 2000 |) | Examiner: Russel, J. |
| |) | |
| Title: SYNTHESIS OF PROTEINS BY |) | |
| NATIVE CHEMICAL LIGATION |) | Our Ref.: TSRI 478.0Con1 |

Supplemental Reply to Examiner's Answer

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This communication is supplemental to Applicant's Reply to Examiner's Answer, mailed 10/24/05. Applicant wishes to further clarify the application of *In re Rasmussen* with respect to Issues No. 1-3 of the present case.

Clarification of Argument

Issues No. 1-3:

In re Rasmussen, 650 F.2d at 1214, 211 U.S.P.Q. at 326-27, held that a disclosure of a single example of a method of "adhereingly applying" one layer to another was sufficient to support a generic claim to "adhereingly applying" because one skilled in the art reading the specification would understand that it is unimportant how

the layers are adhered, so long as they are adhered.

Claim 11 of the present application is directed to a method for ligating two peptides to form a derivative of a naturally isolatable protein having one or more **variant residues** not found in said naturally isolatable protein. Claim 32 of the present application is more narrow than Claim 11 and is directed to a method for ligating two peptides to form a desired protein or domain thereof that is a derivative of a naturally isolatable protein having one or more **cysteine residues** not found in said naturally isolatable protein. Although claims 11 and 32 differ slightly in scope, the application of *Rasmussen* to each of claims 11 and 32 is the same. However, the *Rasmussen* analysis of both claims must be divided into two instances, viz., Instance #1, wherein the variant residues or cysteines are not at the point of ligation; and Instance #2, wherein the variant residues or cysteines are at the point of ligation.

Applicant's Reply correctly analyzed the application of *Rasmussen* to Instance #1, i.e., if the variant residues or cysteines are **not** at the point of ligation, one skilled in the art reading the specification would understand that it is unimportant with respect to the claimed ligation process whether or not variant residues or cysteines were introduced at points other than the point of ligation. A person skilled in the art would realize that the ligation process of claims 11 and 32 would proceed equally well whether or not variant amino acids or cysteines existed at points in the resultant protein other than the point of ligation. Accordingly, according to the rule of *Rasmussen*, a specification having only one example is sufficient to support the patentability of a generic claim with respect to ligation processes falling under Instance #1.

Applicant wishes to clarify the application of *Rasmussen* to Instance #2. In Instance #2, the variant residues or cysteines are at the point of ligation. It should be

noted that both claims 11 and 32 impose a number of limitations on the amino acids at the point of ligation. Both Claims 11 and 32 require that the first oligopeptide include a C-terminal thioester and that the second oligopeptide include an N-terminus having an amino acid residue with an unoxidized sulfhydryl side chain and a free amino group capable of forming a β -aminothioester linkage with the C-terminal thioester that rearranges to form an amide bond therein between. Hence, claims 11 and 32 include both structural and functional limitations on the amino acid residues at the point of ligation. One skilled in the art, reading the specification, would understand that it is important for the operability of the ligation process to conform with these structural and functional limitations with respect to the amino acids at the point of ligation. However, given these limitations, one skilled in the art would also realize that it would be unimportant with respect to the operability of the claimed ligation process whether or not the amino acids at the point of ligation were variant residues not found in any naturally isolatable protein. Accordingly, in Instance #2, the introduction of variant amino acids must conform with and be consistent with other structural and functional limitations within claims 11 and 32 relating to the amino acids at the point of ligation. But given these limitations, the introduction of variants (in conformance with the limitations) would be understood by a skilled person to be unimportant to the operability of the claimed ligation process. By application of the rule of *Rasmussen*, the provision of one example in the specification is sufficient to support claims such as claims 11 and 32 with respect to Instance #2.

Summary of Supplemental Reply:

The rule of *Rasmussen* applies to both Instances #1 and #2 of claims 11 and 32. Under the rule of *Rasmussen*, Claims 11 and 32 are patentably supported by the specification. Reversal of the Examiner's final rejection of claims 11 and 32 is requested.

Respectfully submitted,



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November 23, 2005
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